CHAPTER 1

INTRODUCTION

1.1 Introduction

This study is describe about implementation of Building Information Modelling in construction industry. Some basic information of the study including background of study, problem statement, research objective, research question, scope of the study, significant of the study, expected outcome and definition of term.

1.2 Background of Study

The Malaysian construction industry is productive and generates wealth for the country by addressing social and economic needs through the provision of infrastructures and buildings that constantly contribute to the growth of the economy Hamid (2010). Explained that the Malaysian construction industry is separated into two areas, which are construction and special works. At present, the construction industry is continuously expanding towards economic growth as stated in Ibrahim et al. (2010). Therefore, the construction industry plays an important role in the economic development of the country in the world.

In construction, getting the right information to the right place means overcoming the challenges of the organizational problem of the industry and the site-based location of much of its work according to Davies & Harty (2013). Thus, Information Technology (IT) can be defined as the use of electronic machines and programmes for the processing, storage, transfer and presentation of information as stated in Kasim (2011). He also emphasize the communication technology (ICT) today an important part of IT. Malaysia seem to be developing countries because the demand for founding infrastructure is highly increasing. Thus, the information technology is a very essential for the construction industries in Malaysia to avoid any issues that need to face. Generally, the construction industry in Malaysia has lagged behind other industries in embracing ICT said by Kasim (2011). It was found that although the professionals are quick to use the computerization into their construction processes, but the contractor, worker and builders are still far from the adoption of ICT. The level performance of the ICT still not satisfied among user. This is cause of different software that use such as the types of software and the application which it might cause the information of the project will not accurate.

However, regarding to the problem construction industry has introduced a Building Information Modeling (BIM). BIM implementation is expected to upgrade the design and construction through 3D visualization simulation, composite and production drawings automatically, documentation and retrieving information, data and consistent information, conflict detection and automatic calculation of building materials (Haron, 2013).

Malaysia encourage the implementation of BIM in construction industry. Construction industry must upgrade the current construction approach, practice, management and technologies as stated in Ali, Haron, & Marshall-ponting (2014). This is because the Malaysian construction industry faces a major challenge to improve productivity, quality and value to the construction industry for the construction industry in Malaysia is an industry that is often faced with the problem of delay, the production of medium productivity, labor intensive and are still using technology long Zahrizan et al.(2013). The issue happens because in the construction industry construction process is complex and involves many

parties that require collaborative communication and coordination as well as the construction of an effective team member (Antonio et al., 2012).

BIM as an approach to building design and construction distinguishes it from other technologies. This is not only because of 3D model, but also the structured information that organized, defined, and exchangeable. The structured information is more opened and the most effective communication and collaboration during project lifecycle. However, for this study focus more about the adoption of BIM for construction industries in Malaysia.

1.3 Problem Statement of Study

Today, construction industry in Malaysia is facing huge challenge from the communities to increase their productivity, quality, and value. This is because, construction industry has been seen as the most problem in industry in Malaysia such as cost overrun, delay, the production of low quality product, intensive labor as well as still using old technology said by Zakaria et al. (2013). This is happen because in dealing with complex project and involves many parties. Then, in construction industry involved a lot exchange among them mostly involve a lot of documentation and drawing.

In Malaysia, the adoption of BIM is still in early stage because only a few companies or organizations that are implementing BIM software in their organization and construction projects such as Sime Darby Berhad, Brundsfield, Sunway Putra Perdana and UEM as stated in CREAM (2014). In comparison to the USA and the Nordic European countries which this company implement the BIM in every project. However, in Malaysia all those companies have involved in construct the complex, unique, and high cost project. This is because there are some challenges or obstacles that must be faced by the project team members in the construction industry, particularly small and medium enterprises (SME's) as a high cost in implementing BIM in construction projects to replace the old construction method (CREAM, 2014). However, this is also supported by Ir Ahmad Asri Abdul Hamid which is Senior General Manager Development Sector said three main things that seen barriers BIM